# **ANALYTICAL REPORT**

### PREPARED FOR

Attn: Terri Choy AECOM 1001 Bishop Street Honolulu, Hawaii 96813

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### **JOB DESCRIPTION**

Red Hill - AFFF Assessment Sampling

### **JOB NUMBER**

580-121397-1

Eurofins Seattle 5755 8th Street East Tacoma WA 98424



## **Eurofins Seattle**

#### **Job Notes**

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The data in the report relate to the field sample(s) as received by the laboratory and associated QC. All results have been reviewed and have been found to be compliant with laboratory and accreditation requirements, with the exception of the noted deviation(s). For questions, please contact the Project Manager.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Northwest, LLC Project Manager.

#### **Authorization**

M. Elaine Walker

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Authorized for release by Marie Walker, Senior Project Manager M.Elaine.Walker@et.eurofinsus.com (253)248-4972 \_

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Client: AECOM

Project/Site: Red Hill - AFFF Assessment Sampling

Laboratory Job ID: 580-121397-1

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#### **Case Narrative**

Client: AECOM Job ID: 580-121397-1

Project/Site: Red Hill - AFFF Assessment Sampling

Job ID: 580-121397-1

**Laboratory: Eurofins Seattle** 

Narrative

#### CASE NARRATIVE Client: AECOM

Project: Red Hill - AFFF Assessment Sampling Report Number: 580-121397-1

This case narrative is in the form of an exception report, where only the anomalies related to this report, method specific performance and/or QA/QC issues are discussed. If there are no issues to report, this narrative will include a statement that documents that there are no relevant data issues.

It should be noted that samples with elevated Reporting Limits (RLs) resulting from a dilution may not be able to satisfy customer reporting limits in some cases. Such increases in the RLs are an unavoidable but acceptable consequence of sample dilution that enables quantification of target analytes within the calibration range of the instrument or that reduces the interferences thereby enabling the quantification of target analytes.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

#### **RECEIPT**

Four samples were received on 12/17/2022 9:00 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 1.8° C.

Note: All samples which require thermal preservation are considered acceptable if the arrival temperature is within 2C of the required temperature or method specified range. For samples with a specified temperature of 4C, samples with a temperature ranging from just above freezing temperature of water to 6C shall be acceptable. Samples that are hand delivered immediately following collection may not meet these criteria, however they will be deemed acceptable according to NELAC standards, if there is evidence that the chilling process has begun, such as arrival on ice, etc.

#### **GLYCOLS - 2-(2-BUTOXYETHOXY)ETHANOL**

Samples ADIT6-DU05-SON01MI-22DEC (580-121397-1), ADIT6-DU06-SON01MI-22DEC (580-121397-2), ADIT6-DU07-SON01MI-22DEC (580-121397-3) and ADIT6-DU08-SON01MI-22DEC (580-121397-4) were analyzed for glycols in accordance with EPA SW-846 Method 8015C DAI. The samples were leached on 12/28/2022 and analyzed on 12/29/2022.

The continuing calibration verification (CCV) associated with batch 680-757248 recovered outside acceptance criteria, low biased, for 2-(2-Butoxyethoxy)ethanol. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect for the analyte, the data has been reported.

The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 680-757073 and analytical batch 680-757248 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Samples ADIT6-DU05-SON01MI-22DEC (580-121397-1)[10X] and ADIT6-DU07-SON01MI-22DEC (580-121397-3)[10X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### **PERCENT SOLIDS**

Samples ADIT6-DU05-SON01MI-22DEC (580-121397-1), ADIT6-DU06-SON01MI-22DEC (580-121397-2), ADIT6-DU07-SON01MI-22DEC (580-121397-3) and ADIT6-DU08-SON01MI-22DEC (580-121397-4) were analyzed for percent solids in accordance with ASTM D2216. The samples were analyzed on 12/28/2022.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

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#### **Definitions/Glossary**

Client: AECOM Job ID: 580-121397-1

Project/Site: Red Hill - AFFF Assessment Sampling

#### **Qualifiers**

Qualifier

#### **GC Semi VOA**

J1	Estimated: The quantitation is an estimation due to discrepancies in meeting certain analyte-specific quality control criteria.
M	Manual integrated compound.

Q One or more quality control criteria failed.
U Undetected at the Limit of Detection.

**Qualifier Description** 

#### **Glossary**

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor

DL Detection Limit (DoD/DOE)
DL, RA, RE, IN Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample

DLC Decision Level Concentration (Radiochemistry)

EDL Estimated Detection Limit (Dioxin)

LOD Limit of Detection (DoD/DOE)

LOQ Limit of Quantitation (DoD/DOE)

MCL EPA recommended "Maximum Contaminant Level"

MDA Minimum Detectable Activity (Radiochemistry)

MDC Minimum Detectable Concentration (Radiochemistry)

MDL Method Detection Limit
ML Minimum Level (Dioxin)
MPN Most Probable Number
MQL Method Quantitation Limit

NC Not Calculated

ND Not Detected at the reporting limit (or MDL or EDL if shown)

NEG Negative / Absent
POS Positive / Present

PQL Practical Quantitation Limit

PRES Presumptive
QC Quality Control

RER Relative Error Ratio (Radiochemistry)

RL Reporting Limit or Requested Limit (Radiochemistry)

RPD Relative Percent Difference, a measure of the relative difference between two points

TEF Toxicity Equivalent Factor (Dioxin)
TEQ Toxicity Equivalent Quotient (Dioxin)

TNTC Too Numerous To Count

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Client: AECOM Job ID: 580-121397-1

Project/Site: Red Hill - AFFF Assessment Sampling

Client Sample ID: ADIT6-DU05-SON01MI-22DEC Lab Sample ID: 580-121397-1

Date Collected: 12/15/22 15:10

Date Received: 12/17/22 09:00

General Chemistry									
Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	18.2		0.01	0.01	%			12/28/22 13:21	1
Percent Solids (EPA Moisture)	81.8		0.01	0.01	%			12/28/22 13:21	1

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Client: AECOM Job ID: 580-121397-1

Project/Site: Red Hill - AFFF Assessment Sampling

Client Sample ID: ADIT6-DU05-SON01MI-22DEC Lab Sample ID: 580-121397-1

Date Collected: 12/15/22 15:10

Date Received: 12/17/22 09:00

Matrix: Solid
Percent Solids: 81.8

Method: SW846 8015C GLY - Glycols- Direct Injection (GC/FID) - Soluble

ı	Method: SW846 8015C GLY - Glyc	ois- Dir	ect injectio	n (GC/FID) - 5	oluble	<b>)</b>				
	Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
l	2-(2-Butoxyethoxy)ethanol	27	U J1 Q M	90	11	mg/Kg	<del>*</del>		12/29/22 14:50	10

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Client: AECOM Job ID: 580-121397-1

Project/Site: Red Hill - AFFF Assessment Sampling

Client Sample ID: ADIT6-DU06-SON01MI-22DEC Lab Sample ID: 580-121397-2

Date Collected: 12/15/22 14:40 Matrix: Solid

Date Received: 12/17/22 09:00

General Chemistry								
Analyte	Result Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	21.0	0.01	0.01	%			12/28/22 13:21	1
Percent Solids (EPA Moisture)	79.0	0.01	0.01	%			12/28/22 13:21	1

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Client: AECOM Job ID: 580-121397-1

Project/Site: Red Hill - AFFF Assessment Sampling

Client Sample ID: ADIT6-DU06-SON01MI-22DEC Lab Sample ID: 580-121397-2

Date Collected: 12/15/22 14:40

Matrix: Solid

Date Received: 12/15/22 14:40

Percent Solids: 79.0

Date Received: 12/17/22 09:00 Percent Solids: 79.0

Method: SW846 8015C GLY - 0	Glycols- Dir	ect Injectio	n (GC/FID) - \$	Soluble	)				
Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
2-(2-Butoxyethoxy)ethanol	1.9	UQM	6.3	0.78	mg/Kg	<u> </u>		12/29/22 15:58	1

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Client: AECOM Job ID: 580-121397-1

Project/Site: Red Hill - AFFF Assessment Sampling

Client Sample ID: ADIT6-DU07-SON01MI-22DEC Lab Sample ID: 580-121397-3

Date Collected: 12/15/22 14:55

Date Received: 12/17/22 09:00

General Chemistry								
Analyte	Result Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	26.7	0.01	0.01	%			12/28/22 13:21	1
Percent Solids (EPA Moisture)	73.3	0.01	0.01	%			12/28/22 13:21	1

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Client: AECOM Job ID: 580-121397-1

Project/Site: Red Hill - AFFF Assessment Sampling

Client Sample ID: ADIT6-DU07-SON01MI-22DEC Lab Sample ID: 580-121397-3

Date Collected: 12/15/22 14:55

Matrix: Solid

Date Received: 12/17/22 09:00 Percent Solids: 73.3

Method: SW846 8015C GLY - 0	3lycols- Direct Injection	n (GC/FID) - S	Soluble				
Analyte	Result Qualifier	LOQ	DL Unit	D	Prepared	Analyzed	Dil Fac
2-(2-Butoxvethoxv)ethanol	29 UQ	98	12 ma/Ka	— <u> </u>		12/29/22 16:21	10

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Client: AECOM Job ID: 580-121397-1

Project/Site: Red Hill - AFFF Assessment Sampling

Client Sample ID: ADIT6-DU08-SON01MI-22DEC Lab Sample ID: 580-121397-4

Date Collected: 12/15/22 11:32

Date Received: 12/17/22 09:00

General Chemistry									
Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	18.5		0.01	0.01	%			12/28/22 13:21	1
Percent Solids (EPA Moisture)	81.5		0.01	0.01	%			12/28/22 13:21	1

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Client: AECOM Job ID: 580-121397-1

Project/Site: Red Hill - AFFF Assessment Sampling

Client Sample ID: ADIT6-DU08-SON01MI-22DEC Lab Sample ID: 580-121397-4

Date Collected: 12/15/22 11:32 **Matrix: Solid** 

Date Received: 12/17/22 09:00 Percent Solids: 81.5

Method: SW846 8015C GLY - Glycols- Direct Injection (GC/FID) - Soluble										
Analyte	Result	Qualifier	LOQ	DL	Unit	D	Prepared	Analyzed	Dil Fac	
2-(2-Butoxyethoxy)ethanol	2.6	U Q	8.8	1.1	mg/Kg	<u></u>		12/29/22 16:43	1	

Job ID: 580-121397-1

Project/Site: Red Hill - AFFF Assessment Sampling

Method: 8015C GLY - Glycols- Direct Injection (GC/FID)

Lab Sample ID: MB 680-757073/1-A Client Sample ID: Method Blank **Matrix: Solid Prep Type: Soluble** 

**Analysis Batch: 757248** 

Client: AECOM

MB MB Result Qualifier LOQ DL Unit Analyzed Dil Fac Analyte Prepared 4.7 12/29/22 14:28 2-(2-Butoxyethoxy)ethanol 14 II 0.58 mg/Kg

Lab Sample ID: LCS 680-757073/2-A Client Sample ID: Lab Control Sample **Matrix: Solid Prep Type: Soluble** 

**Analysis Batch: 757248** 

Spike LCS LCS %Rec Added Result Qualifier Unit D %Rec Limits 39.5 50 - 150 2-(2-Butoxyethoxy)ethanol 39 1 mg/Kg

Lab Sample ID: LCSD 680-757073/3-A Client Sample ID: Lab Control Sample Dup **Prep Type: Soluble** 

Matrix: Solid

**Analysis Batch: 757248** 

Spike LCSD LCSD %Rec RPD Added Result Qualifier Limits Analyte Unit D %Rec **RPD** Limit 2-(2-Butoxyethoxy)ethanol 37.9 45.0 mg/Kg

Lab Sample ID: 580-121397-1 MS Client Sample ID: ADIT6-DU05-SON01MI-22DEC **Prep Type: Soluble** 

**Matrix: Solid** 

**Analysis Batch: 757248** 

Spike MS MS %Rec Sample Sample Added Analyte Result Qualifier Result Qualifier Unit %Rec Limits 2-(2-Butoxyethoxy)ethanol 27 U J1 Q M 22.9 26 U J1 M mg/Kg 50 - 150

Lab Sample ID: 580-121397-1 MSD Client Sample ID: ADIT6-DU05-SON01MI-22DEC **Prep Type: Soluble** 

**Matrix: Solid** 

**Analysis Batch: 757248** 

MSD MSD RPD Sample Sample Spike %Rec Result Qualifier Added Result Qualifier Limits Analyte Unit Limit 2-(2-Butoxyethoxy)ethanol 27 U J1 Q M 22.9 2.6 U M J1 mg/Kg 50 - 150

Lab Sample ID: 580-121397-1 DU Client Sample ID: ADIT6-DU05-SON01MI-22DEC **Prep Type: Soluble** 

**Matrix: Solid** 

**Analysis Batch: 757248** 

DU DU Sample Sample **RPD** Result Qualifier Result Qualifier Limit Analyte 27 U J1 Q M 2-(2-Butoxyethoxy)ethanol 27 UMQ

Lab Sample ID: 580-121397-1 TRL Client Sample ID: ADIT6-DU05-SON01MI-22DEC **Prep Type: Soluble** 

**Matrix: Solid** 

**Analysis Batch: 757248** 

Sample Sample TRL TRL **RSD** Result Qualifier Result Qualifier RSD Limit Unit 27 U J1 Q M 2-(2-Butoxyethoxy)ethanol 27 UQ mg/Kg

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Job ID: 580-121397-1

**Matrix: Solid** 

**Matrix: Solid** 

**Matrix: Solid** 

**Matrix: Solid** 

**Matrix: Solid** 

Matrix: Solid

**Matrix: Solid** 

Percent Solids: 73.3

Percent Solids: 79.0

Lab Sample ID: 580-121397-1

Lab Sample ID: 580-121397-1

Lab Sample ID: 580-121397-2

Lab Sample ID: 580-121397-2

Lab Sample ID: 580-121397-3

Lab Sample ID: 580-121397-3

Lab Sample ID: 580-121397-4

Project/Site: Red Hill - AFFF Assessment Sampling

Client Sample ID: ADIT6-DU05-SON01MI-22DEC

Date Collected: 12/15/22 15:10 Date Received: 12/17/22 09:00

_	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	Moisture		1	757069	KF	EET SAV	12/28/22 13:21

Client Sample ID: ADIT6-DU05-SON01MI-22DEC

Date Collected: 12/15/22 15:10

Client: AECOM

<b>Date Receive</b>	d: 12/17/22 0		Perce	nt Solids: 81.8					
	Batch	Batch		Dilution	Batch			Prepared	
Prep Type	Type	Method	Run	Factor	Number A	Analyst	Lab	or Analyzed	
Soluble	Leach	DI Leach			757073	GEM	EET SAV	12/28/22 11:59	
Soluble	Analysis	8015C GLY		10	757248	JCK	EET SAV	12/29/22 14:50	

Client Sample ID: ADIT6-DU06-SON01MI-22DEC

Date Collected: 12/15/22 14:40

Date Received: 12/17/22 09:00

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	Moisture		1	757069	KF	EET SAV	12/28/22 13:21

Client Sample ID: ADIT6-DU06-SON01MI-22DEC

Date Collected: 12/15/22 14:40

Date Received: 12/17/22 09:00

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Soluble	Leach	DI Leach			757073	GEM	EET SAV	12/28/22 11:59
Soluble	Analysis	8015C GLY		1	757248	JCK	EET SAV	12/29/22 15:58

Client Sample ID: ADIT6-DU07-SON01MI-22DEC

Date Collected: 12/15/22 14:55

Date Received: 12/17/22 09:00

	Batch	Batch		Dilution	Batch		Prepared
Prep Type	Type	Method	Run	Factor	Number Analys	Lab	or Analyzed
Total/NA	Analysis	Moisture		1	757069 KF	EET SAV	12/28/22 13:21

Client Sample ID: ADIT6-DU07-SON01MI-22DEC

Date Collected: 12/15/22 14:55

Date Received: 12/17/22 09:00

		Batch	Batch		Dilution	Batch			Prepared
	Prep Type	Туре	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
l	Total/NA	Analysis	Moisture		1	757069	KF	EET SAV	12/28/22 13:21

Batch Batch Dilution Batch Prepared

Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Soluble	Leach	DI Leach			757073	GEM	EET SAV	12/28/22 11:59
Soluble	Analysis	8015C GLY		10	757248	JCK	EET SAV	12/29/22 16:21

Client Sample ID: ADIT6-DU08-SON01MI-22DEC

Date Collected: 12/15/22 11:32

Date Received: 12/17/22 09:00

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Total/NA	Analysis	Moisture			757069	KF	EET SAV	12/28/22 13:21

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#### **Lab Chronicle**

Client: AECOM Job ID: 580-121397-1

Project/Site: Red Hill - AFFF Assessment Sampling

Client Sample ID: ADIT6-DU08-SON01MI-22DEC Lab Sample ID: 580-121397-4

Date Collected: 12/15/22 11:32 Matrix: Solid

Date Received: 12/17/22 09:00 Percent Solids: 81.5

	Batch	Batch		Dilution	Batch			Prepared
Prep Type	Type	Method	Run	Factor	Number	Analyst	Lab	or Analyzed
Soluble	Leach	DI Leach			757073	GEM	EET SAV	12/28/22 11:59
Soluble	Analysis	8015C GLY		1	757248	JCK	EET SAV	12/29/22 16:43

#### **Laboratory References:**

EET SAV = Eurofins Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

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### **Accreditation/Certification Summary**

Client: AECOM Job ID: 580-121397-1

Project/Site: Red Hill - AFFF Assessment Sampling

#### **Laboratory: Eurofins Savannah**

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority		Program	Identification Number	Expiration Date
ANAB		Dept. of Defense ELAP	L2463	09-22-24
the agency does not	offer certification.		, , ,	This list may include analytes for which
Analysis Method	Prep Method	Matrix	Analyte	
8015C GLY		Solid	2-(2-Butoxyethoxy)ethanol	
Moisture		Solid	Percent Moisture	
Moisture		Solid	Percent Solids	

**Eurofins Seattle** 

### **Sample Summary**

Client: AECOM Job ID: 580-121397-1

Project/Site: Red Hill - AFFF Assessment Sampling

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-121397-1	ADIT6-DU05-SON01MI-22DEC	Solid	12/15/22 15:10	12/17/22 09:00
580-121397-2	ADIT6-DU06-SON01MI-22DEC	Solid	12/15/22 14:40	12/17/22 09:00
580-121397-3	ADIT6-DU07-SON01MI-22DEC	Solid	12/15/22 14:55	12/17/22 09:00
580-121397-4	ADIT6-DU08-SON01MI-22DEC	Solid	12/15/22 11:32	12/17/22 09:00

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5755 8th Street East Tacoma, WA 98424

### **Chain of Custody Record**

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Environment Testing America

Client Information	Sampler: Mik	ch B	1 das	Lab Elai		Walk	ег						Carr	ier Trai	king N	lo(s):			COC No: 01-221215-23F0	1104-EUSea	
Client Contact:	Phone: 504		0 X77	E-M		ne.W.	alker	@Euro	nfins	ET cr	nm.		<u> </u>	of Ori	gin:				Page: Page 1 of 1	7104 E0000	
Company: AECOM	1		PWSID:		T					Ana		. D.				·········	·		Job #:		
Address:	Due Date Reques		1		╁				T	Alla	iysis	ne	que	stea		$\neg$		100	Preservation Cod	ies:	····
1001 Bishop St. Suite 1600 City:	TAT Requested (	days):			┨														A - HCL B - NaOH	M - Hexane N - None	
Honolulu State, Zip:		Rush - /	ASAP				<u> </u>												C - Zn Acetate D - Nitric Acid	O - AsNaO2 P - Na2O4S	
Hawaii 96813	Compliance Proje	ect: A Yes	Δ No		1		ethar										1	100	E - NaHSO4 F - MeOH	Q - Na2SO3	
Phone: 808-954-4512 / 808-356-5311	PO #:				ō		óxy.									1			G - Amehlor H - Ascorbic Acid	R - Na2S2O3 S - H2SO4	
Email: Watson Tanji (watson.tanji⊛aecom.com)/ Brant Landers. (brant.landers.⊛aecom.com	WO#:				s or	ş	xyeth							122				w	I - Ice J - Di Water	T - TSP Dodecahy U - Acetone V - MCAA	/drate
Project Name: CTO N6274223F0104	Project #: 60697810				ڠ	(Yes or No)	-buto					1	13					containers	K - EDTA L - EDA	W - pH 4-5 Z - other (specify)	
Site:	SSOW#:				Sample (Yes	æ GS	D5/ 2-(2-butoxyethoxy)-ethanol						1					con	Other:	Z - Other (specify)	
RHSF		Γ	f _	<u> </u>	Spa	SINSIN	ਰ ਹ			5								er of			
			Sample Type	Matrix (Wowater,	F F	E	DAI GL			1						ĺ		Number			
Sample Identification	Cample Date	Sample	(C=comp,	S≈solid, O⊭waste/oil,	Field	Perform	8015C		1									Total			
Sample Identification	Sample Date	Time	G=grab) Preserva	BT=Tissue, A=Air)	Ž	Ż	×			N A	104	1 30	, i i A	333	AA S	31 3	A AV	Š	Special Ins	tructions/Note	
ADIT6-DU05-SON01MI-22DEC	12/15/22	1510	G	S	N	N	x	_	1	1		†			4.74		100000	$\stackrel{\frown}{}$	Store ALL samples	until notified by	lient to
ADIT6-DU06-SON01MI-22DEC	12/15/12	1440	G	S	N	N	x	$\top$	†	+	$\dagger$			$\dashv$		+	<del> </del>	1	dispose		
ADIT6-DU07-SON01MI-22DEC	12/15/22	1455	G	S	N	N	x		T	$\top$	†	<del> </del>		1	_	_		300			
ADIT6-DU08-SON01MI-22DEC	12/15/22	1132	G	S	N	N	x	$\top$	<del> </del>			$\vdash$		_			<del>                                     </del>	1			
× 1					H	$\dagger$	_	_	$\dagger$		†	1		-		=-	<del>                                     </del>	3.513.5	J & 0 15	nc: 1.7 =	
					$\Box$	$\dashv$	$\top$			1	-	-		Th	erm	ID:	42	- C	or: 1.8 ° U	DO -	
mo 12	115/22				H				+	+	+	<del> </del>		Co	oler cking	Dsc:_ 			FedEx UPS:_	<u> </u>	
					$\vdash$	-	+	-	+-	+	-			- Ci	st. S	eal:	بي ا	$Z_{0}$	Lab C	our:	
					$\perp$	+	_		$\perp$	-	<del> </del>			Bl	ue Ic	e, Avi	t, Dr	y, N	one Other		
					$\dashv$		_	<u> </u>	ļ					<sub>1</sub>			<b>/</b> <del>!                                    </del>	-			
Possible Hazard Identification					4	$\bot$													*****		
Non-Hazard Flammable Skin Irritant Poison B	Unknown	Hadiol	ogical		ľ	Samı	DIE LI ] <sub>Ret</sub>	<b>rispos</b> urn To	<b>ai (</b> i ∩lie	A fee	may [	be a	sses:	<b>sed if</b> al By	sam	pies i	ere re	tain:	<b>ed longer than 1</b> ive For	month) Months	
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Δ Yes Δ No	· .						_												_	Ver: 01/16/2019	
									Ш										,	ver. 01/10/2019	

5755 8th Street East Tacoma, WA 98424

### **Chain of Custody Record**

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Environment Testing America

Client Information	Sampler: Mik	ch B	1 das	Lab Elai		Walk	ег						Carr	ier Trai	king N	lo(s):			COC No: 01-221215-23F0	1104-EUSea	
Client Contact:	Phone: 504		0 X77	E-M		ne.W.	alker	@Euro	nfins	ET cr	nm.		<u> </u>	of Ori	gin:				Page: Page 1 of 1	7104 E0000	
Company: AECOM	1		PWSID:		T					Ana		. D.				········	·		Job #:		
Address:	Due Date Reques		1		╁				T	Alla	iysis	ne	que	stea		$\neg$		100	Preservation Cod	ies:	····
1001 Bishop St. Suite 1600 City:	TAT Requested (	days):			┨														A - HCL B - NaOH	M - Hexane N - None	
Honolulu State, Zip:		Rush - /	ASAP				<u> </u>												C - Zn Acetate D - Nitric Acid	O - AsNaO2 P - Na2O4S	
Hawaii 96813	Compliance Proje	ect: A Yes	Δ No		1		ethar										1	100	E - NaHSO4 F - MeOH	Q - Na2SO3	
Phone: 808-954-4512 / 808-356-5311	PO #:				ō		óxy.									1			G - Amehlor H - Ascorbic Acid	R - Na2S2O3 S - H2SO4	
Email: Watson Tanji (watson.tanji⊛aecom.com)/ Brant Landers. (brant.landers.⊛aecom.com	WO#:				s or	ş	xyeth							122				w	I - Ice J - Di Water	T - TSP Dodecahy U - Acetone V - MCAA	/drate
Project Name: CTO N6274223F0104	Project #: 60697810				ڠ	(Yes or No)	-buto					1	13					containers	K - EDTA L - EDA	W - pH 4-5 Z - other (specify)	
Site:	SSOW#:				Sample (Yes	æ GS	D5/ 2-(2-butoxyethoxy)-ethanol						1					con	Other:	Z - Other (specify)	
RHSF		Γ	f _	<u> </u>	Spa	SINSIN	ਰ ਹ			5								er of			
			Sample Type	Matrix (Wowater,	F F	E	DAI GL			1						ĺ		Number			
Sample Identification	Cample Date	Sample	(C=comp,	S≈solid, O⊭waste/oil,	Field	Perform	8015C		1									Total			
Sample Identification	Sample Date	Time	G=grab) Preserva	BT=Tissue, A=Air)	Ž	Ż	×			N A	104	1 30	, i i A	333	AA S	31 3	A AV	Š	Special Ins	tructions/Note	
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ADIT6-DU07-SON01MI-22DEC	12/15/22	1455	G	S	N	N	x		T	$\top$	†	<del> </del>		1	_	_		1000			
ADIT6-DU08-SON01MI-22DEC	12/15/22	1132	G	S	N	N	x	$\top$	<del> </del>			$\vdash$		_			<del>                                     </del>	1			
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Possible Hazard Identification					4	$\bot$													*****		
Non-Hazard Flammable Skin Irritant Poison B	Unknown	Hadiol	ogical		ľ	Samı	DIE LI ] <sub>Ret</sub>	<b>rispos</b> urn To	<b>ai (</b> i ∩lie	A fee	may [	be a	sses:	<b>sed if</b> al By	sam	pies i	ere re	tain:	<b>ed longer than 1</b> ive For	month) Months	
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Empty Kit Relinquished by:	4 report standar	LTAT. AFC Date:	OM EQuIS		Tim	e:							N	lethod	of Ship	ment:				<u> </u>	
VVIII BURE	Date/Time: 12/15/22	160		Сотралу АЕСОМ			ceive	rou	rol.	Ç-i	T	05	_ev	eva.		e/Time	5/22		1600	Company AE(O)W	$\exists$
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5755 8th Street East Tacoma, WA 98424

### **Chain of Custody Record**

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Environment Testing America

	Sampler:	1		li a	ab PM:								10	T	-1 1	<del></del>					
Client Information	Elaine Walker						Carrier Tracking No(s): FedEx						COC No: 01-221215-23F0104-EUSea								
Client Contact:	Phone: 504	554	0877		-Mail: LEtain						State of Origin: Hawaii						Page:				
Company:			PWSID:	122		3333		S 4. (1)									*		Page 1 of 1	<del></del>	
AECOM Address:	Due Date Reques	ted:	<u> </u>		_					lnaly	ysis	Rec	ues	ted		<del></del>					
1001 Bishop St. Suite 1600	see subcontrac	rt .														İ			Preservation Co		
City: Honolulu	TAT Requested (	days): Rush -	ΔSΔΡ																B - NaOH	M - Hexane N - None	
State, Zip:							ē l								ĺ				C - Zn Acetate D - Nitric Acid	O - AsNaO2 P - Na2O4S	
Hawaii 96813 Phone:	Compliance Proje	ect: △ Yes	A No				- ap										1		E - NaHSO4 F - MeOH	Q - Na2SO3 R - Na2S2O3	
808-954-4512 / 808-356-5311					- Q		(XX)									1			G - Amchior	S - H2SO4	
Email: Watson Tanji (watson.tanji@aecom.com)/ Brant Landers (brant.landers@aecom.com	WO #:				ō	Θ.	2-(2-butoxyethoxy)-ethano							24					H - Ascorbic Acid L - Ice	T - TSP Dodec U - Acetone	ahydrate
Project Name:	Project #:				څ ا	\$	onto					N	5			İ		containers	J - Di Water K - EDTA	V - MCAA W - pH 4-5	
CTO N6274223F0104 Site:	60697810   SSOW#:				- BG	Ses	<u>4</u>											ntai	L - EDA	Z - other (speci	ify)
RHSF	55UVV#:				Sam	8	25			,	0		l					ofc	Other:		
			Sample		밀	MS/MSD (Yes	ಡ			15	1							ber			
			Туре	Matrix (₩=water,			M			1								Number			
Sample Identification	Sample Date	Sample Time	(C=comp,	S=solid, O≃waste/oil,	용	Perform	8015C		1							İ		Total			
	Sample Date	111116	G=grab)	BT=Tissue, A=Ai tion Code:	<b>"</b>	<b>∵</b>	-				13.1	33	260		1A.1 0	<del> </del>	1 6000	S	Special Ins	structions/No	ote:
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ADIT6-DU06-SON01MI-22DEC	12/15/12	1440	G	S	┰		x	+	+			$\dashv$	$\dashv$	_	+	+-	+		dispose		
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Possible Hazard Identification					1 5	Samp	le Di	spos	al ( A	tee n	nav i	e as	sess	ed if	same	oles s	re rei	aine	ed longer than 1	month)	
Non-Hazard Flammable Skin Irritant Poison B	Unknown	Radiol	ogical			إلـــا	Retu	ırn To	Clien	t		🗿 Dis	sposa	i Bv	Lab	[		rchi	ve For	Months	
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5755 8th Street East Tacoma, WA 98424

### **Chain of Custody Record**

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Environment Testing America

Client Information	Sampler: Mitch Brown Elaine W							Walker						cking	No(s)				COC No: 01-221215-23F0104-EUSea			
Client Contact:	Phone: 500	554	0877		Mail: Elaín							State of Origin: Hawaii					Page:					
Company:		<u> </u>	PWSID:	12.5		223 1 611	1101 9	(27 ()31	-							***************************************		Job #:				
AECOM Addregs:	Due Date Reque	sted:			-			T	An	alys	is R	eque	sted		-			4				
1001 Bishop St. Suite 1600	see subcontra	ct			╛						-					İ		Prese	ervation (		Mayaaa	
City: Honolulu	TAT Requested (	days): Rush	ASAP			1.	_											B - Na		N -	Hexane None AsNaO2	
State, Zip: Hawaii 96813	Compliance Proj	ect: Δ Yes	A No		-											/	500	E - Na	itric Acid aHSO4		Na2O4S Na2SO3	
Phone: 808-954-4512 / 808-356-5311	PO #:				ĵ.	1	1								1				mehlor	S - }	Na2S2O3 12SO4	
Email: Watson Tanji (watson.tanji@aecom.com)/ Brant Landers (brant.landers@aecom.con	WO #:				s or No)	2							123				Ģ	H - As I - Ice J - Di		ti - i	ΓSP Dode∈ Acetone MCAA	ecahydrate
Project Name: CTO N6274223F0104	Project #: 60697810			e (X	Sput						W					tainer	K - ED	ATC	W -	исаа pH 4-5 other (spec	cify)	
Site: RHSF	SSOW#:			Samp	MS/MSD (Yes or No)					2/				loojo			Other:				,,	
		Sample	Sample Type (C=comp,	Matrix (W=water, S=solid,	d Filtered	M MSM											Number					
Sample Identification	Sample Date	Time	G=grab)	O=waste/oil, BT=Tissue, A=Air		<b>Perto</b> 8015C	_										Total		Special	Instruc	tions/N	iote:
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ADIT6-DU06-SON01MI-22DEC	12/15/22	1440	G	S	Ν	N X											1		×	· ··· · · · · · · · · · · · · · · · ·		***************************************
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Possible Hazard Identification					s	ample	e Disp	osal	( A fe	e ma	y be	asses	sed in	san	ples	are re	etain	ed ion	ger than	1 mon	th)	
Non-Hazard Flammable Skin Irritant Poison B	Unknown	Radiol	ogical			$\sqcup_{F}$	Return	To C	lient			Dispo.	sai Bv	Lab			Arch	hive Foi	r		onths	
Deliverable Requested: I, II, III, IV, Other (specify)	Prelim data (Lev 4 report standar	el 1or2)=see	TAT abov	e. DoD Stag	e S	pecial	Instru	ection	s/QC	Requ	iireme	nts: [	OOD (	)SM	proje	ct.		***************************************				
Empty Kit Relinquished by:		Date:	OWEGUIS	<u> </u>	Time	:						T	viethod	of Sh	ipment	:						
VIMUL Belline	Date/Time; 12/15/22	160		Company AECOM	L	1 1	eived by	Own	Jo.	T	202	Y 2000	. 13.4		te/Tim	e: 5/27	7		e(X>	Comp	any FE(0)	<u></u>
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elinquished by:	Z / 16/22 Date/Time:			Company	<b>~</b> ~		eived by				····	••••		Da	ite/Tim	€T e:	40		2100	Compa	any	<b>-</b>
Custody Seals Intact: Custody Seal No.: Δ Yes Δ No					*1,7%	Coole	er -													Ver: 0	01/16/201	19

Page 22 of 24

Client: AECOM Job Number: 580-121397-1

Login Number: 121397 List Source: Eurofins Seattle

List Number: 1

Creator: Presley, Kim A

Creator: Presiey, Kim A		
Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>N/A</td> <td></td>	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Client: AECOM Job Number: 580-121397-1

Login Number: 121397
List Source: Eurofins Savannah
List Number: 2
List Creation: 12/23/22 11:46 AM

Creator: Sims, Robert D

Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>N/A</td> <td></td>	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	False	Received extra samples not listed on COC.
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

**Eurofins Seattle**